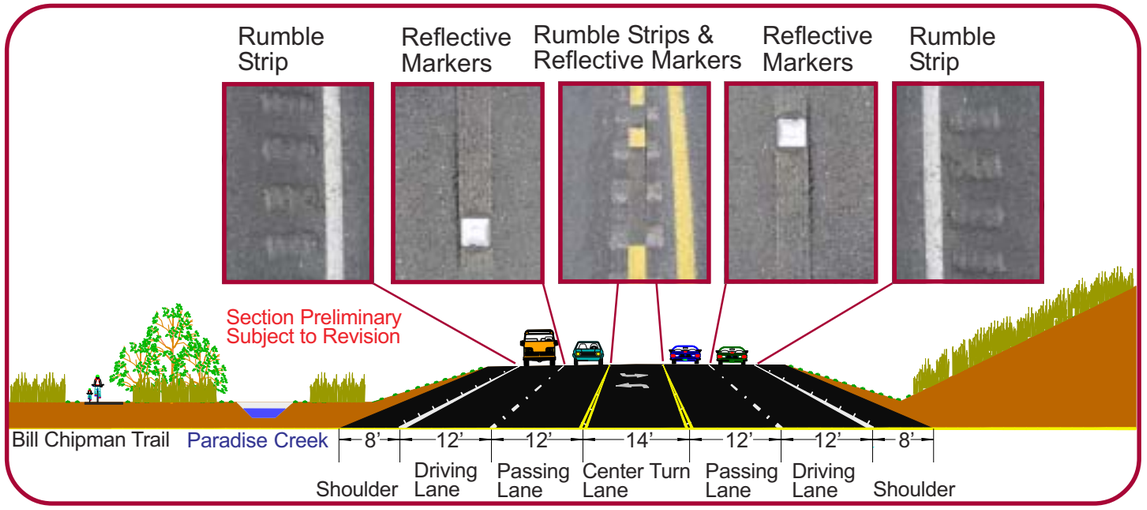
Pullman to Idaho State Line Additional Lanes Project Highway 270

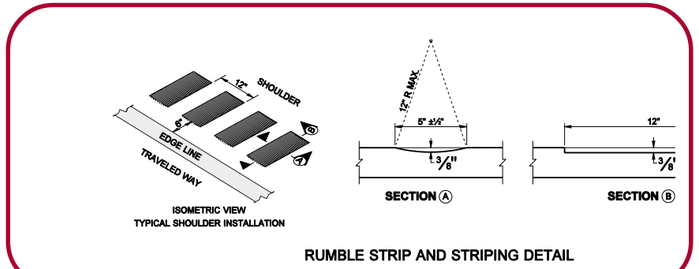


General Information

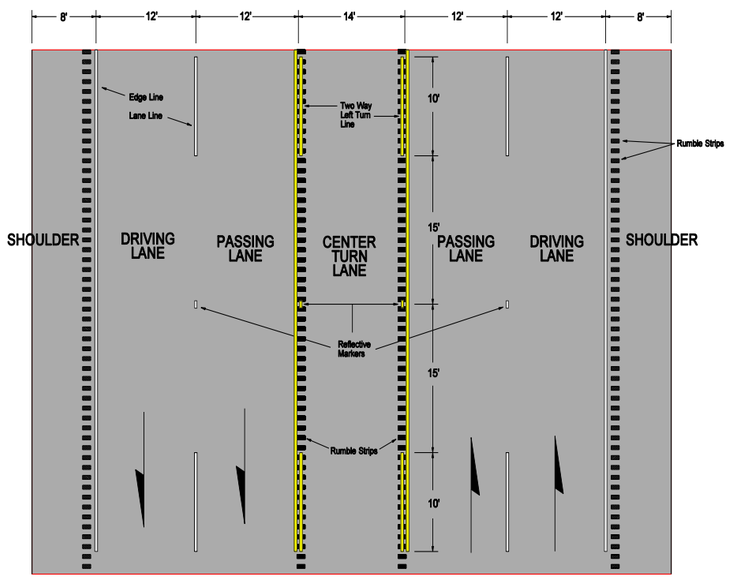
Centerline Rumble Strip Treatments were designed to reduce head-on, sideswipe, and crossing the centerline crashes on two-lane highways. Rumble Strip Treatments are patterns milled into the newly placed asphalt concrete pavement. The Rumble Strip Treatment sends a sonic alert and vibration to drivers who are encroaching on the centerline or the roadway shoulder and provides the driver an opportunity to correct their behavior and return their vehicles to the travel lane. Because of the sound and vibration produced by the rumble strips under the wheels of a vehicle, the treatment effectively alerts drowsy, distracted and impaired drivers that are encroaching on or crossing the centerline.

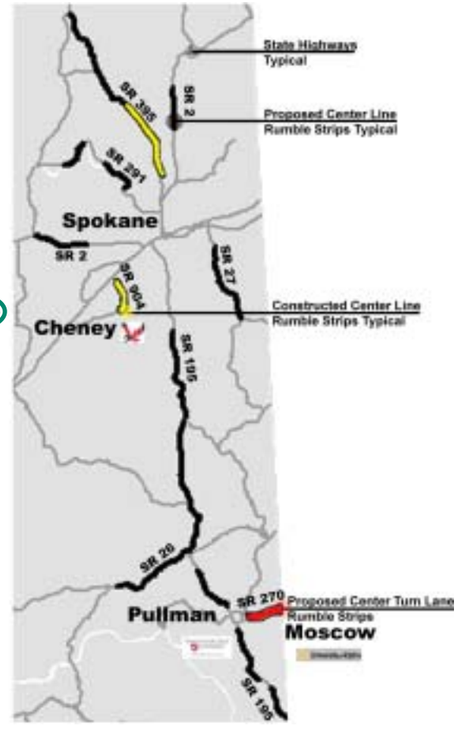
Centerline rumble strip patterns are broken at county and city road intersections to allow vehicles to move into the center turn lane.

- Rumble strips are effective in reducing the number of head-on crossing centerline collisions due to driver inattention, driver error and fatigue.
- Rumble strips placed on the roadway shoulders reduce run off the road crashes.
- Rumble strips show no noticeable degradation of the pavement.
- Rumble strips require little or no maintenance.



RUMBLE STRIP AND STRIPING DETAIL





Comparison of Similar Highways

SR 904 located outside Cheney Washington and SR 270 between Pullman and Moscow are similar sections of highway. SR 904 serves the community of Cheney and Eastern Washington University. SR 904 is a two-lane roadway with an average daily traffic (ADT) similar to SR 270. The Route Development Plan for SR 904 recommends building a five lane undivided highway.

In 2003, WSDOT separated traffic by two feet and installed centerline rumble strips to reduce the crossing centerline collisions occurring on this route. A one (1) year history for the project shows a 46% decrease in total collisions, and a 57% decrease in injury collisions. (Please note that these are short-term results.) The SR 904 project also included shoulder rumble strips, left turn channelization, illumination, increased enforcement and public education.

Supporting Research

"Head-on and opposing-direction sideswipe crashes – the primary target of centerline rumble strips – were reduced by an estimated 21 percent, while head-on and opposing-direction sideswipe crashes involving injuries were reduced by an estimated 25 percent." (Insurance Institute for Highway Safety, 2003, national basis, rural roads.)

Centerline rumble strips can be installed for about $2000 per mile. (Based on nationwide average costs and review of WSDOT projects, this includes project development, administration, and traffic control.)

IT'S YOUR NICKEL. WATCH IT WORK.

Washington State Department of Transportation